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PREVALENCE OF HELMINTHIC INFECTION IN *CAPRA HIRCUS* L. FROM AHMEDNAGAR DISTRICT (M.S.)

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Abstract

The present study deals with the prevalence of helminthic infection in *Capra hircus* during period of July 2008 to June 2009 from Ahmednagar district (M.S.). Out of 300 samples examined 255 (85%) found to be infected with the helminth parasites. The seasonal variation of gastro-intestinal helminthic infection shows the higher prevalence occurs in monsoon (95%) followed by winter (87%) and summer (73%) because of easy dispersal of larvae in pasture resulting in increased in contact with the host and the parasites. Among the helminth parasites found the maximum incidence occurs is of cestode parasites in all seasons (48.33%) followed by nematodes (26.66%) and trematode (10%) respectively.

Keywords: Prevalence, *Capra hircus*, Cestode, host, Trematode, Nematode

Introduction

The district Ahmednagar is located between the latitude 18.2^o to 19.9^o N and longitude 73.9^o to 75.5^o E and the area of district is 17.412 Sq.km. Agroclimetically, the district is divided into 14 Tahsils (Akole, Sangamner, Kopargaon, Shrirampur, Rahuri, Newasa, Rahata, Shevgaon, Pathardi, Srigonda, Jamkhed, Karjat, Parner and Nagar). The mean monthly temperature vary from 19±3^o C in winter to 36±4^o C in summer respectively. The average rainfall is 566 mm. the climate of Ahmednagar district is hot and humid. In Ahmednagar district about 68% of population is rural and depends directly on agriculture and animal Husbandry. Parasitic infection affecting the gastro-intestinal track of *Capra hircus*. The incidence of helminthic infection varies with age, sex, season and agro-climatic conditions. Epidemiological survey of helminthic infections is an important tool in controlling losses due to helminthic druges this paper presents the seasonal prevalence of helminthic infection in *Capra hircus*. Epidemiological survey of helminthic infections is an important tool in controlling losses due to helminthes by adopting effective control measures like deworming the herd by selecting proper broad spectrum and helminthic drugs. This paper presents the seasonal prevalence of helminthic infection in *Capra hircus*.

Material and Methods

A total number of 300 faecal samples from *Capra hircus*, irrespective of age, sex and breed are obtained either when freshly passed or directly from rectum

during the period from July 2008 to June 2009, covering the three different seasons of the year i.e. winter, summer and monsoon from Ahmednagar district covering all areas. The samples are examined by sedimentation techniques and the ova of parasites are identified from their morphological features described by Soulsby (1982). The infected material, which was collected, preserved in 4% formaline (cestodes and trematodes) and 10% glycerol for Nematodes respectively. Borax carmine and Haematoxyline stain are used for staining the Trematodes and Cestodes. The drawings are made with the aid of Camera Lucida and measurements taken in mm. The identification of these parasites were made by using keys "Systema Helminthum" (Yamaguti, S. 1957).

Results and Discussion

Out of 300 samples examined 255 (85%) are found positive for helminth infection, out of these 172 (57.33%) was with single helminth infection and 83(27.66%) were mixed infected. Sarode et al. (1999) observed higher incidence of mixed infection (22%) while Sanjay kale (2007) observed higher percentage of single infection in sheep and Goat (55.83%) and (21.17%) were mixed infection. The prevalence of helminthic infection is (85%). The seasonal variation of gastrointestinal helminthic infection shows that the higher prevalence of parasites in monsoon (95%) followed by winter (87%) and summer (73%). The higher incidence of parasitic infection occurs in rainy season because of easy dispersal of larvae in pasture

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resulting in increased contact between the host and the parasites (Table 1, 2 and 3).

The prevalence of gastrointestinal parasites, the genera of helminth parasites, species and the severity of infection also vary considerably depending on local environmental conditions such as humidity, temperature, rainfall, vegetation and management practices. Climatic conditions are responsible for the distribution and prevalence of the disease. It is well recognized that in resource poor regions of the world helminth infections of sheep and goats are major factors responsible for economic losses through reduction in productivity and increased mortality (Over et al., 1992 and Anon, 1994). The effect of climatic factors on helminthes have elaborately studied by

Kennedy (1968, 1971), Lawrence (1970), Crofton Patric and Esch (1977).

The considerable work on population dynamics were carried out by many authors, such as Esch (1977), Ram Reddy (1980). The study on population dynamics of helminth parasites of rats from Hyderabad was done by Susheela (1987). The season, host, age and sex affect the distribution of endohelminths from *Catostomus commersoni* (Lawrence, 1970). The seasonal incidence of painted turtle studied by Patrick and Esch. (1977). Helminth parasites made their impact on the livestock in the developing countries (Over, H.J. et al. 1992). The flukes causes many diseases to domestic animals (Anon, 1994).

Table.1 Incidence of different types of helminth infection

Name of the parasite	Total no. of sample examined	Number of infected samples	Prevalance %
Cestode	300	145	48.33%
Trematode	300	30	10%
Nematode	300	80	26.66%

Table. 2 Seasonal variation of gastrointestinal helminthic infection

Seasons	Total no. of sample examined	Number of infected samples	Prevalance %
Winter	100	87	87%
Summer	100	73	73%
Monsoon	100	95	95%

Thus this study gives the occurrence of parasitic infection throughout the season and maximum in monsoon season. From the results of the studies on incidence of different types of helminthic infection it is clear that the cestode parasites are predominated during all the seasons with 145(48.33%) followed by nematode parasites with 80 (26.66%) and trematode parasites with 30(10%). Higher incidence of cestode parasites may be due to conductive environment for growth of the parasites. The present study indicates that the occurrences of parasites are dependent on suitable environment which they require in its development.

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